

ABSTRACT

A method and apparatus for removing vapor inside a liquid pump at the start up operation of the pump. In addition, a method and apparatus for removing liquid inside a compressor at the start up operation of the compressor. The pump and compressor each include a sensor attached to them that determines the physical state (i.e., liquid or vapor) of a material inside the pump or compressor. If vapor is detected inside the pump, a thermoelectric module connected to the pump is powered to condense the vapor into a liquid. Likewise, if liquid is detected inside the compressor a heater connected to the compressor is powered to evaporate the liquid into a vapor. After the state of the material inside the pump or compressor is changed, the pump or compressor is powered up for operation in a cooling system.